

100

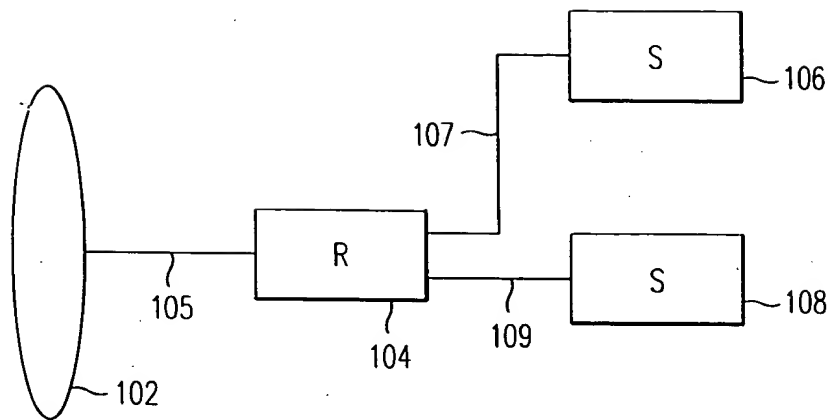


FIG. 1 (Prior Art)

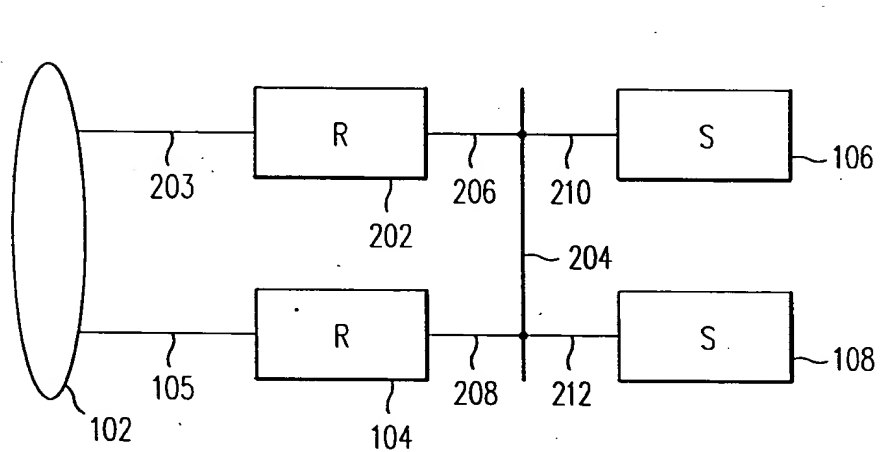


FIG. 2 (Prior Art)

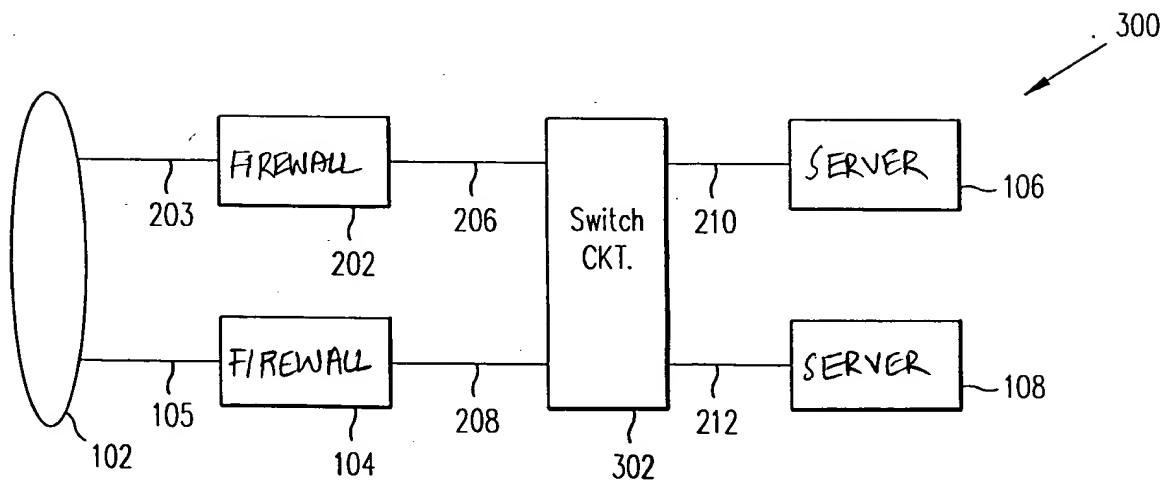


FIG. 3

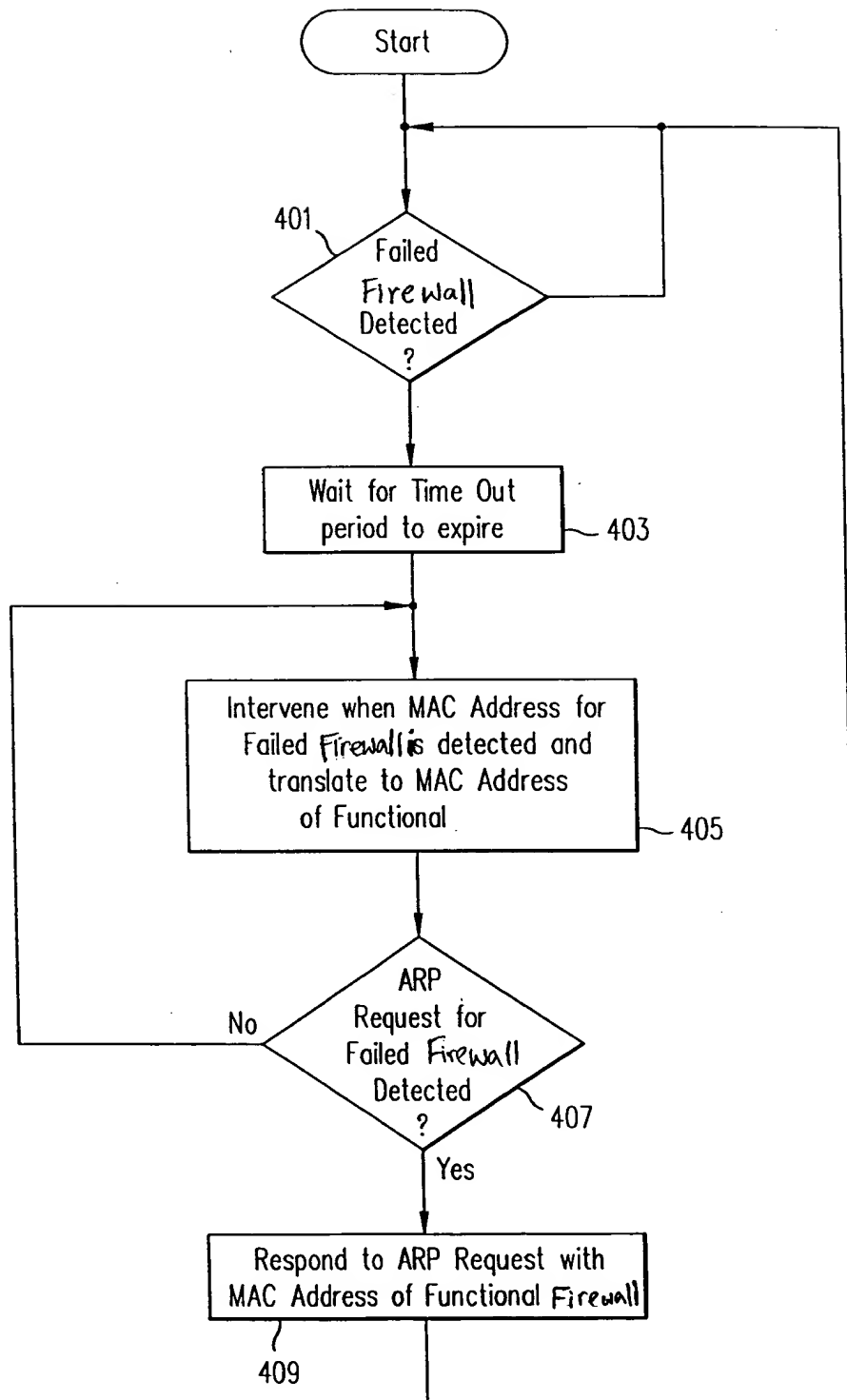


FIG. 4

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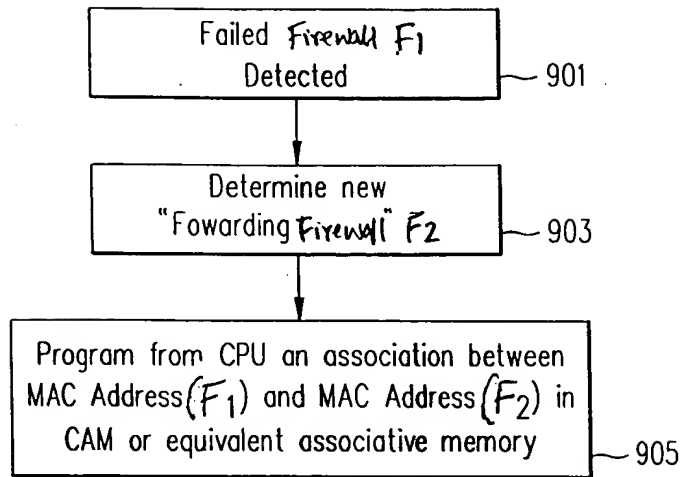


FIG. 8A

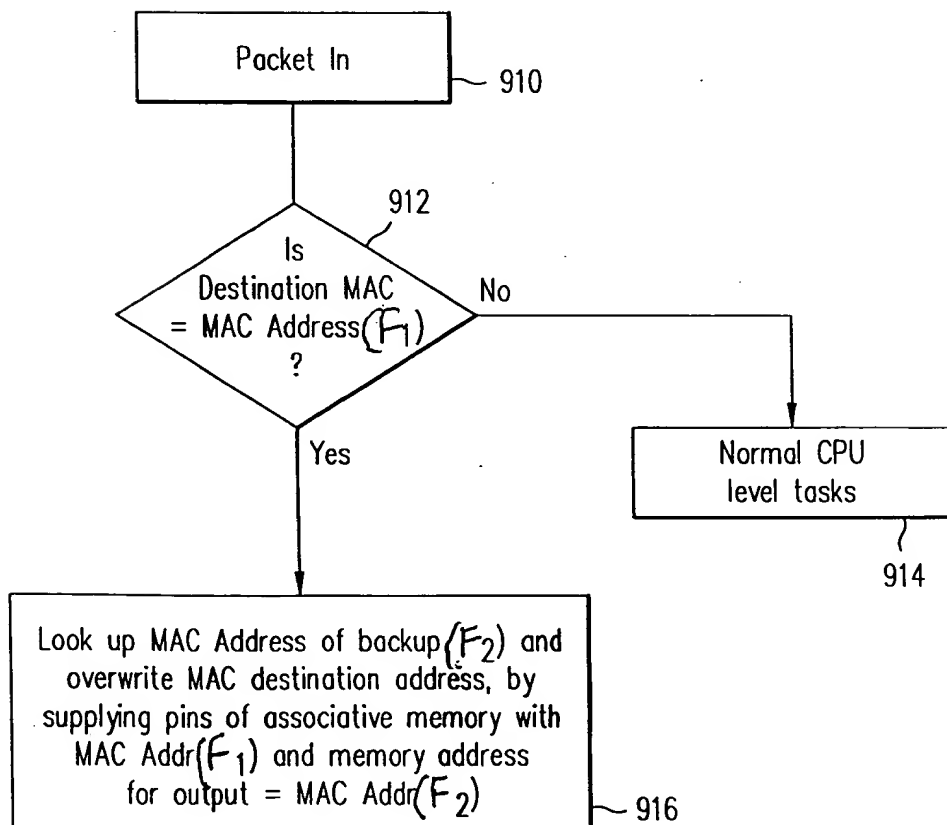


FIG. 8B

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FIG. 9A

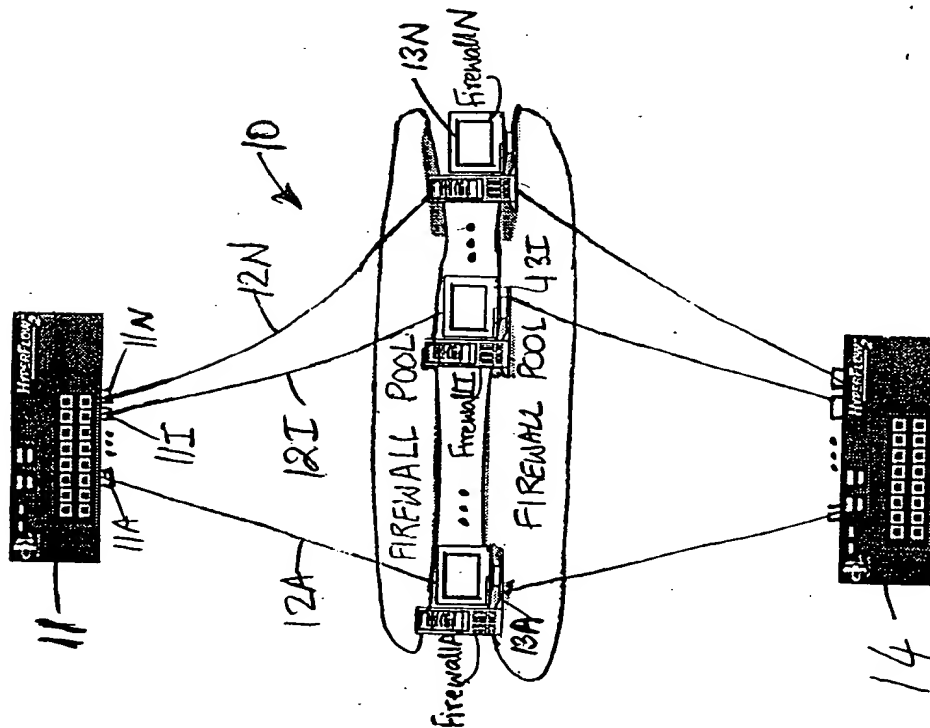
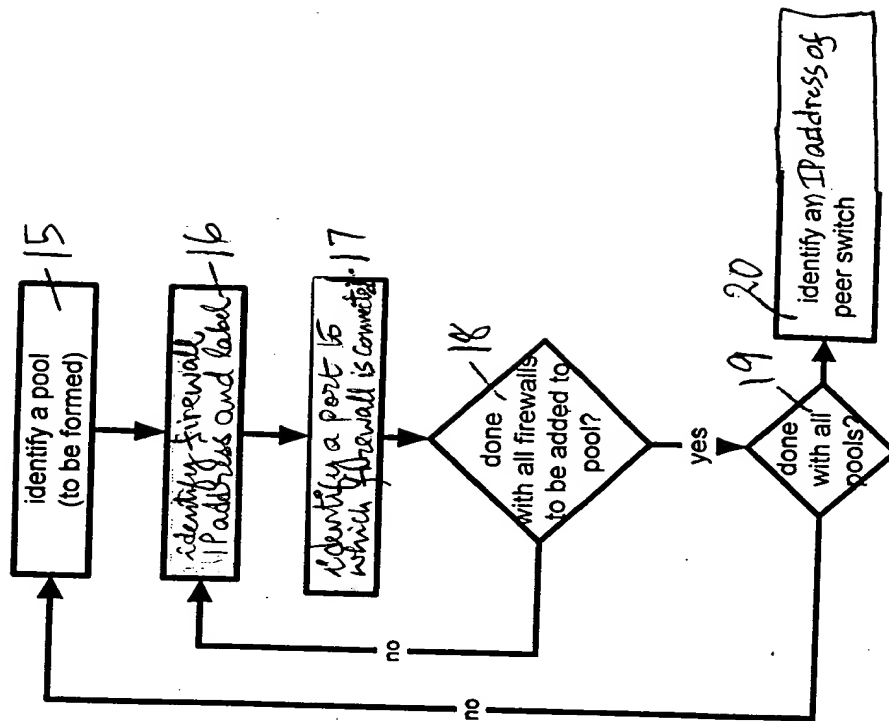


FIG. 9B



```

graph TD
    Start(( )) --> Decision{Has a firewall failed?}
    Decision -- no --> Pass[pass unchanged packet to the firewall]
    Pass --> Start
    Decision -- yes --> Replace[replace, in packet, a layer-2 address of failed firewall with layer-2 address of a functional firewall]
    Replace --> Relay[relay packet with changed layer-2 address to functional firewall]
    Relay --> Start

```

```
graph TD
    25[generate a poll message on a side of a firewall] --> 26[send the poll message, through the firewall, to the other side of the firewall]
    26 --> 27{Was there a response before timeout?}
    27 -- yes --> 29[treat firewall as "functional"]
    27 -- no --> 28[treat firewall as "failed"]
    28 --> 25
```

FIG. 9E

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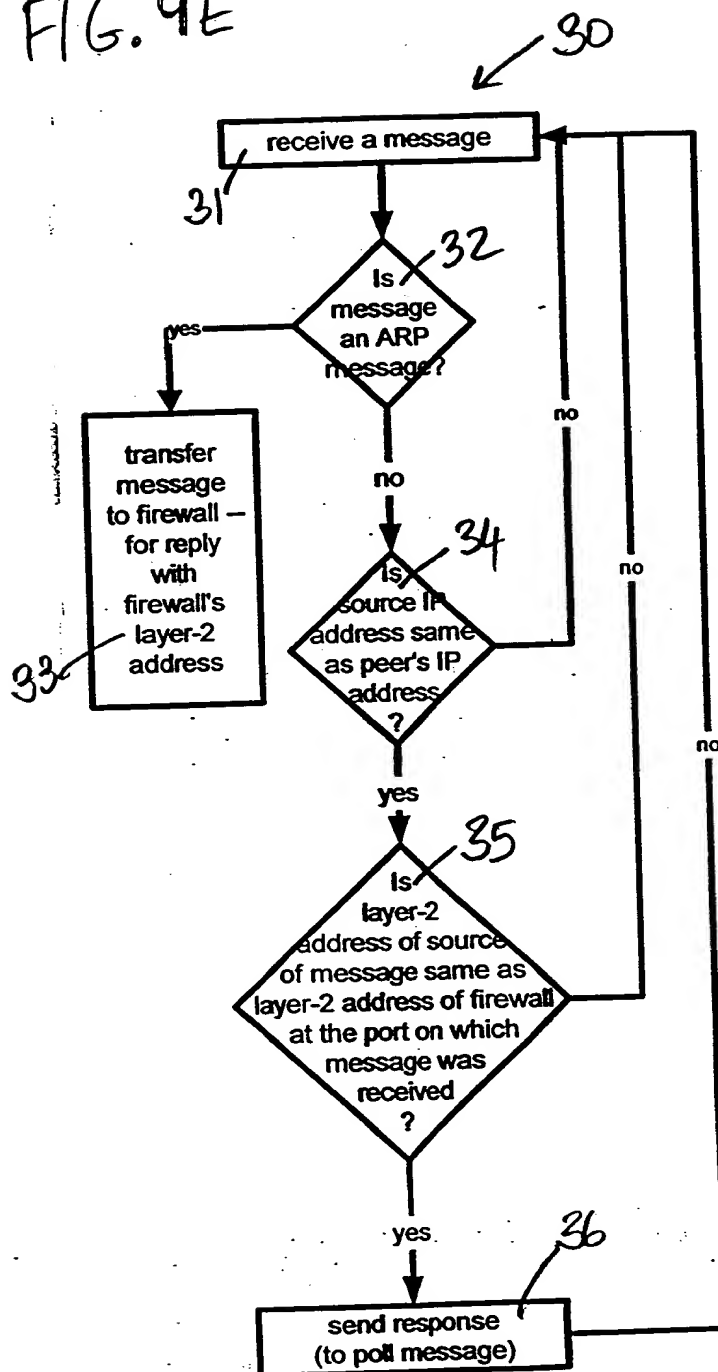
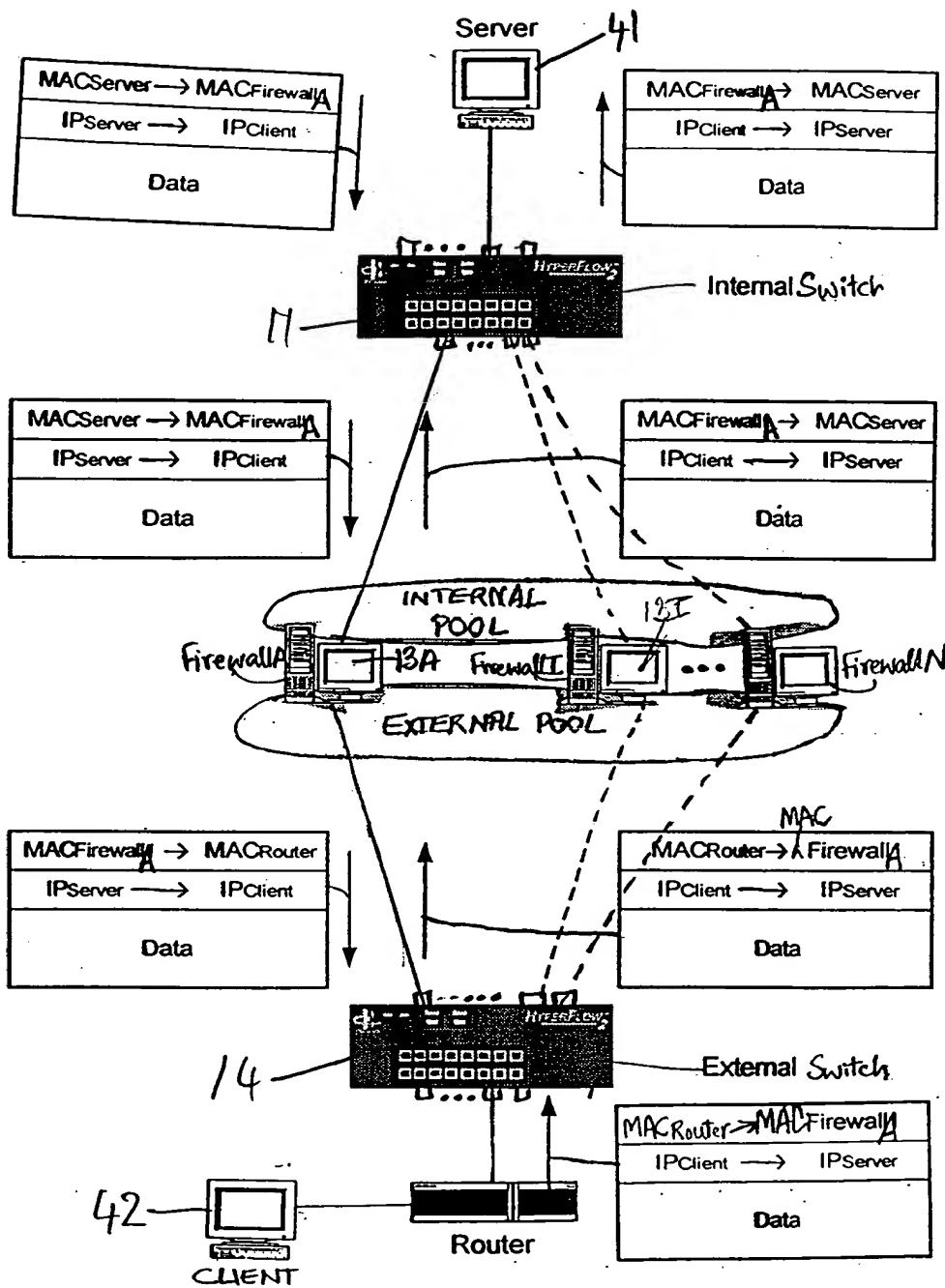


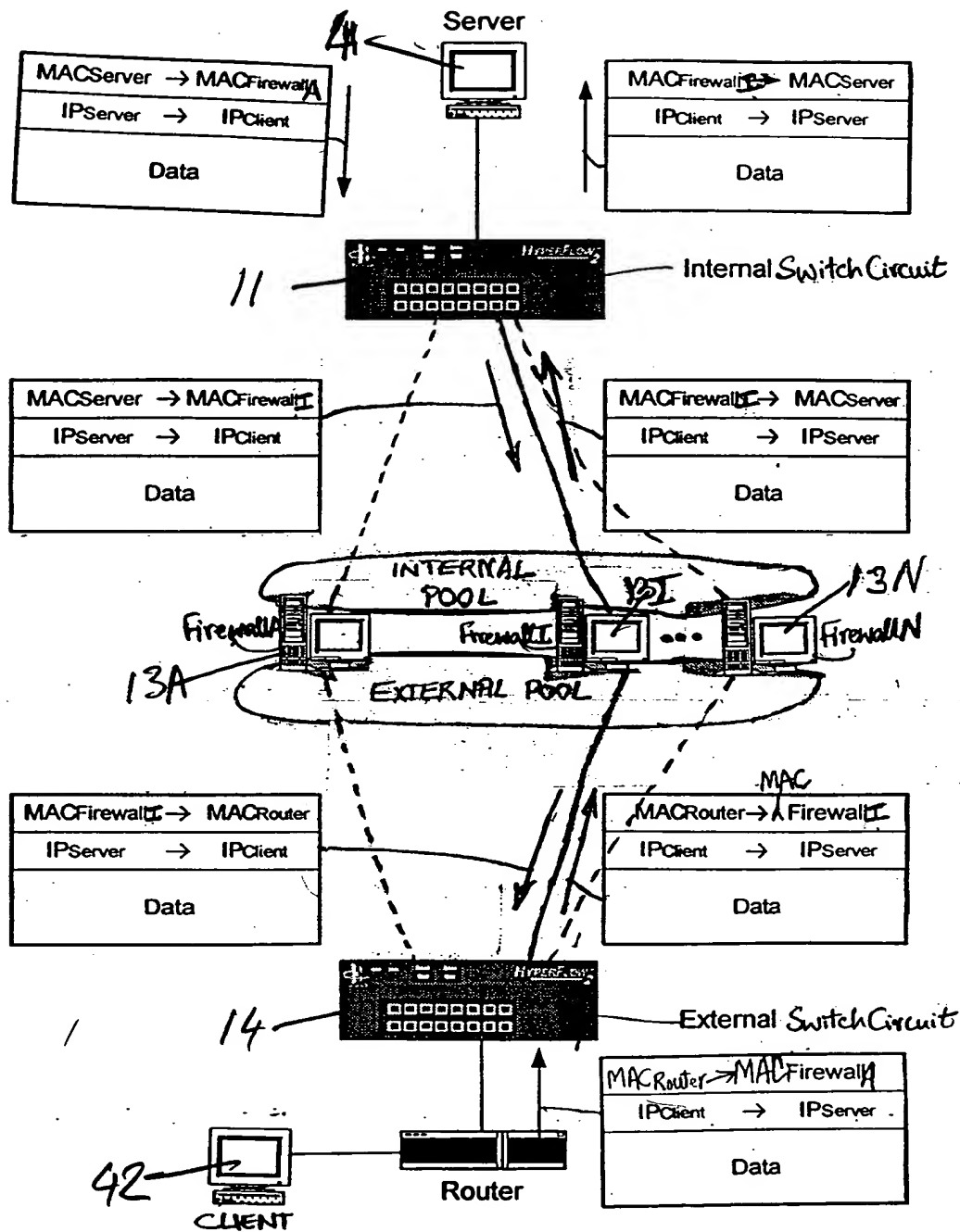
FIG. 9F

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054023 040100

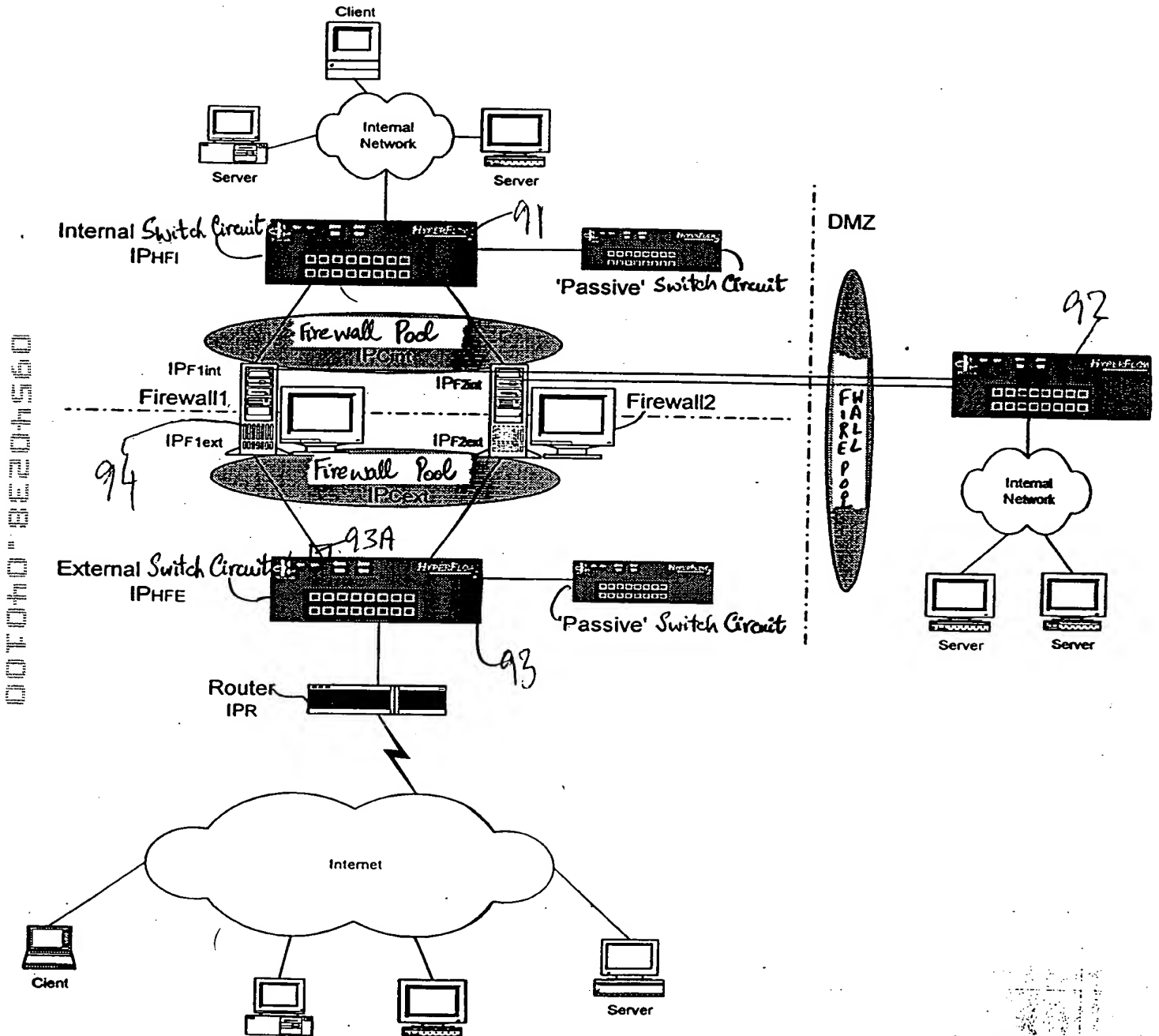
FIG. 96



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FIG. 10

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000000-040100-000000

Pool Id	Any Firewall Faulty in Pool	Replacement Firewall	Firewall List
			<u>55</u>

50 →

FIG. 11 A

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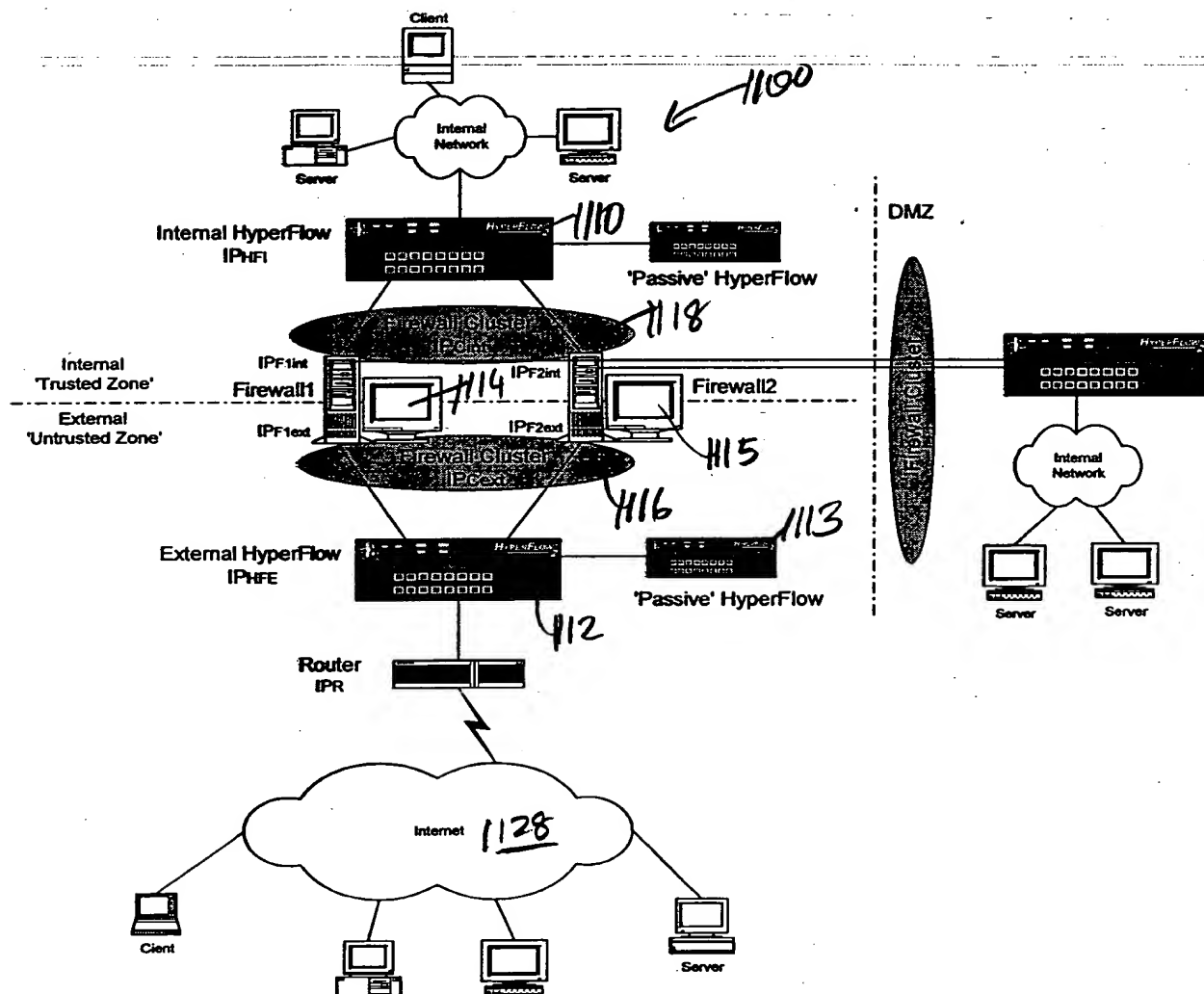
Firewall List

Port	MAC Address	IP Address	This Firewall Faulty	Next Firewall in Pool

FIG. 11 B

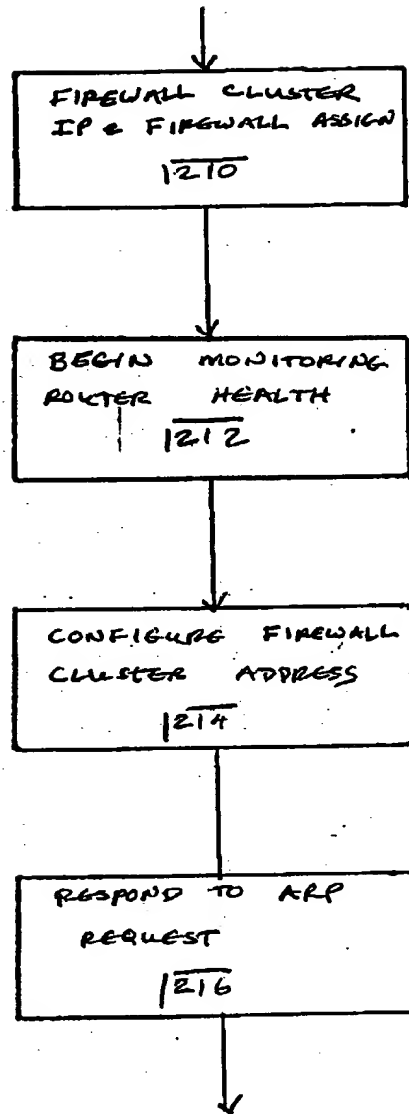
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FIG. 12



004040" 8E204560

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1200
↙

FIG. 13

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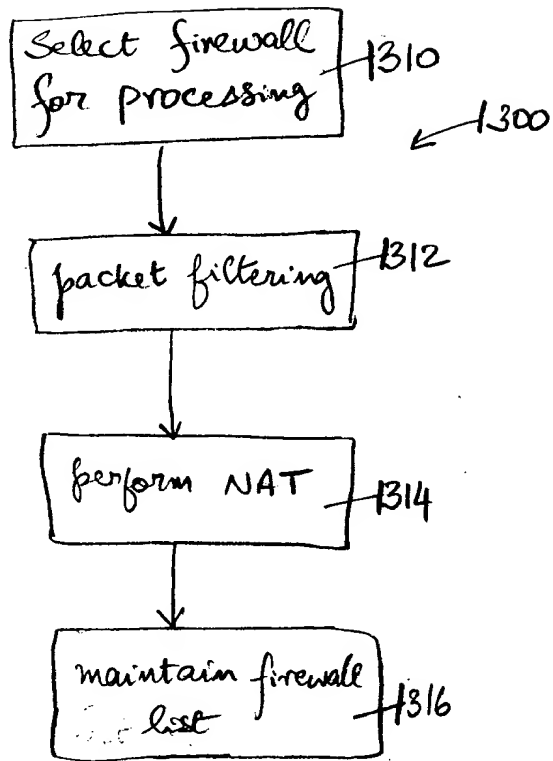


FIG. 14

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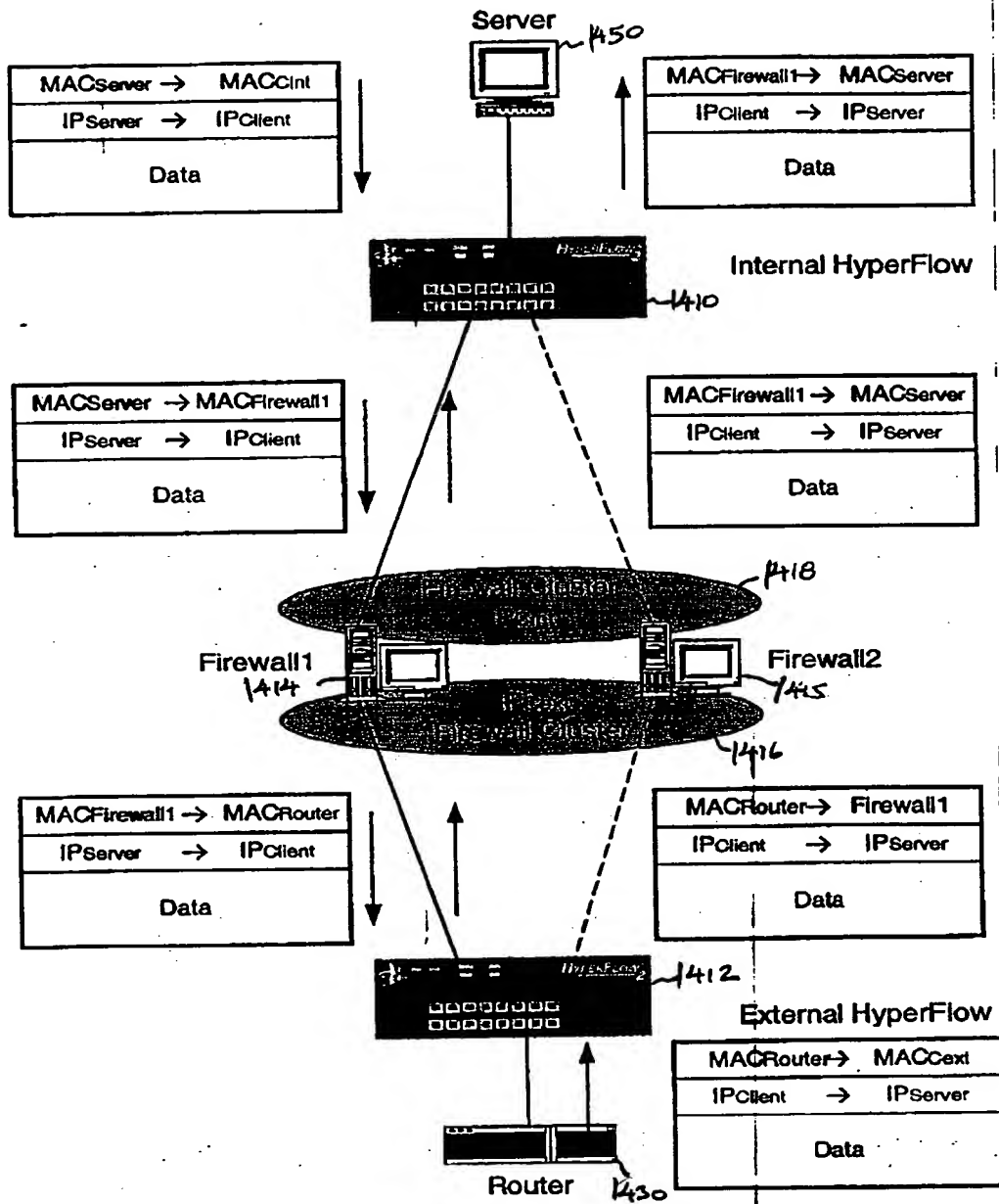


FIG. 15

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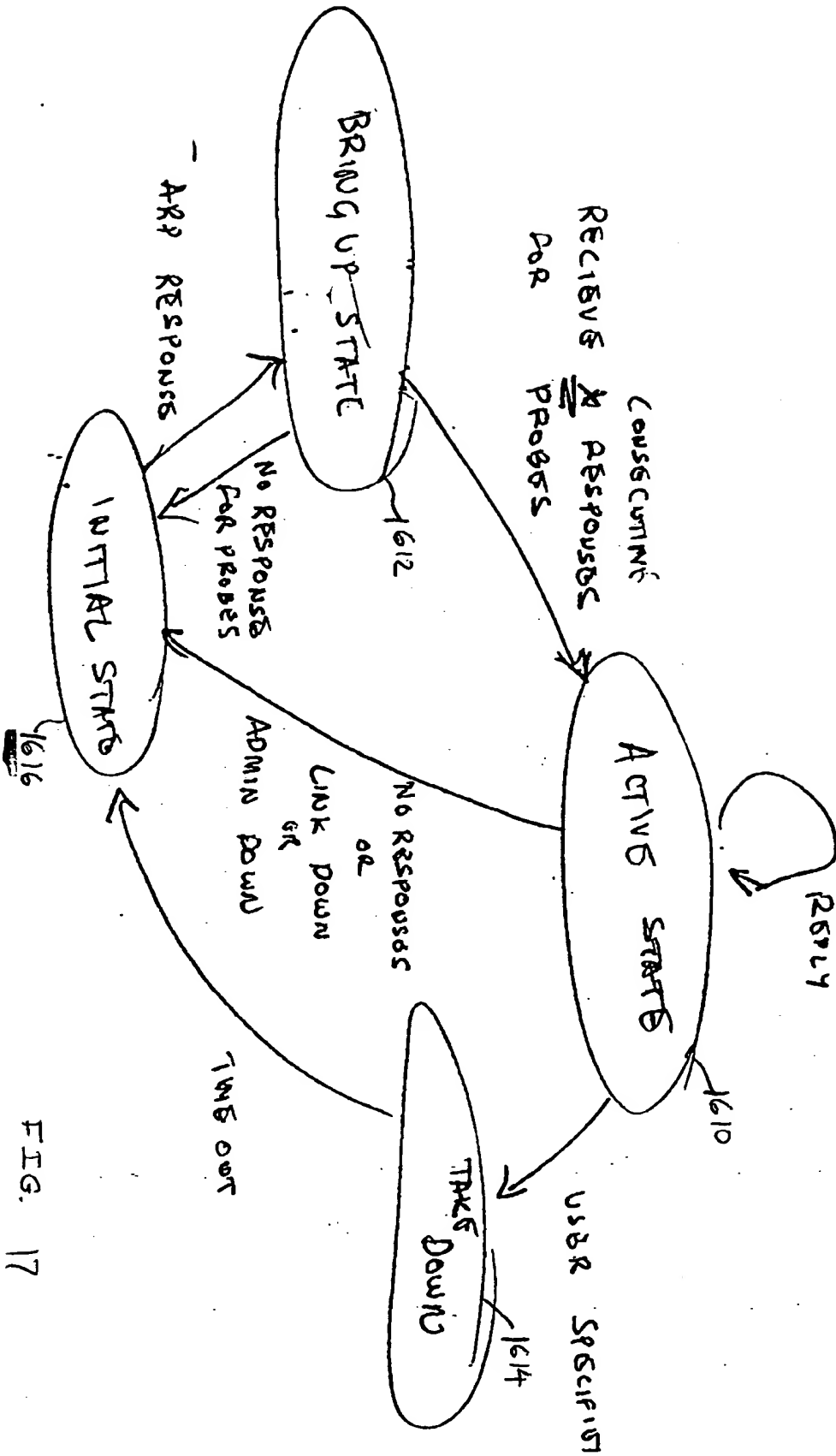


FIG. 17

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188403
1801700
19

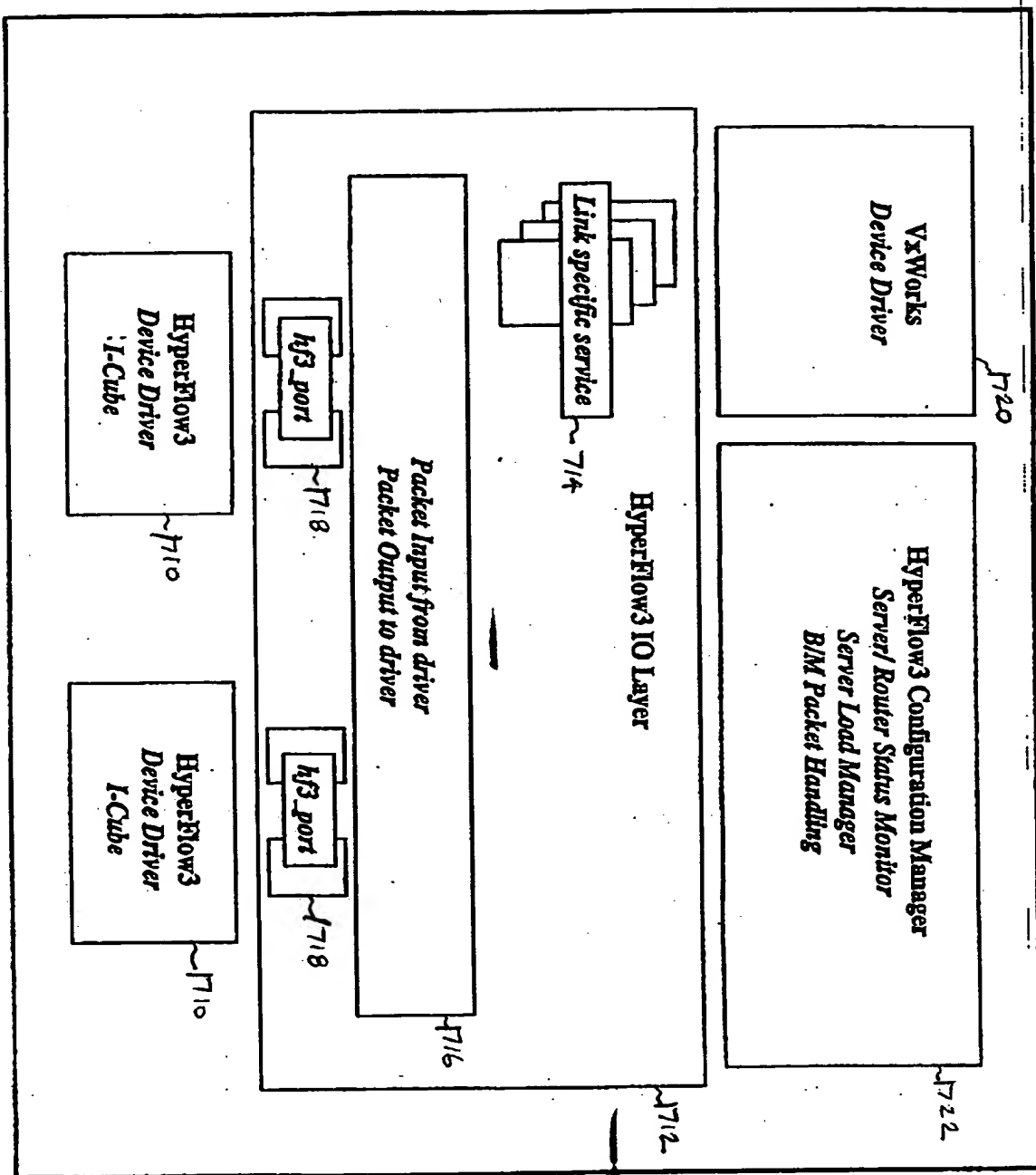


FIG. 18

Layer 3

Layer 2

Layer 1

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1800
↘

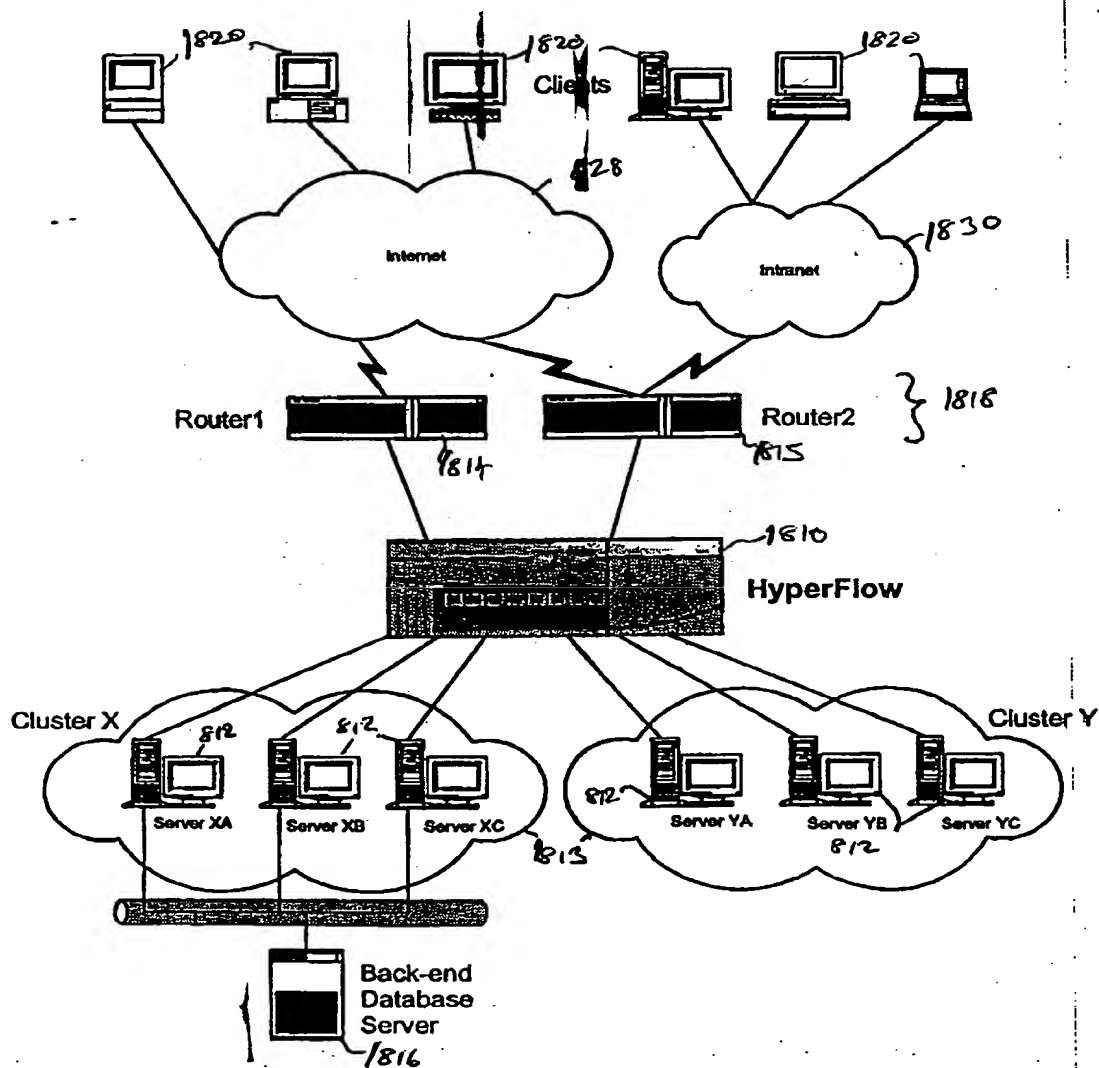


FIG. 19